

Product Name : Melittin

Synonyms : —

Cat No. : M22318

CAS Number : 20449-79-0

Molecular Formula : C131H229N39O31

Formula Weight : 2846.46

Chemical Name : ----

Description

Melittin, a small protein containing 26 amino acid residues, is the principal toxic component of bee venom. Melittin is a PLA2 activator, stimulates the activity of the low molecular weight PLA2, while it does not the increase activity of the high molecular weight PLA2. Melittin, an immunologically related PLA2 stimulating peptide from bee venom, increases the activity of the high molecular weight enzyme. Melittin is a cytotoxic peptide from bee venom. Melittin exhibits toxicity against both A2780CR and A2780 cells, with IC50 values of 4.5 and 6.8 µg/mL, respectively. Melittin has natural anti-bacterial, anti-viral,

and anti-inflammatory properties. It has also been shown to have diverse anticancer effects in several different cancer cell lines including those of gastric, breast, ovarian, liver, prostate, cervical, and lung origins. The mechanisms by which Melittin, an amphipathic haemolytic peptide, exerts its potential anticancer effects include inhibition of cell proliferation, induction of apoptosis, and direct necrosis. Melittin can also prevent EGF-induced cell invasion through its inhibition of the

PI3K/Akt/mTOR signaling pathway, but this is primarily related to breast cancer cells.

Pathway : Metabolic Enzyme/Protease

Target : Phospholipase

Receptor : PLA2

Solubility : H2O:25 mg/mL (8.78 mM)

(Cc1c[nH]c2ccccc12)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H]

(CCCNC(N)=N)C(=0)N[C@@H](CCCCN)C(=0)N[C@@H](CCCNC(N)=N)C(=0)N[C@@H](CCC(N)=0)C(=0)N[C@@H]

(CCC(N)=O)C(N)=O

Storage : (-20°C)

Stability : ≥ 2 years

Reference :

1. Steiner MR, et al. Responses of purified phospholipases A2 to phospholipase A2 activating protein (PLAP) and Melittin. Biochim Biophys Acta. 1993 Feb 10;1166(1):124-30.